	Application No.	Applicant(s)
Notice of Allowability	10/659,127	YANG, QING
	Examiner	Art Unit	
	Apu M. Mofiz	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *08/09/2006*.

2. ☒ The allowed claim(s) is/are *1-22*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

       3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

       1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

      Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date *08/09/2006*

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *hereto* .

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

DETAILED ACTION

EXAMINER'S AMENDMENT

1.   Authorization for Examiner's Amendment was given by Bart Sullivan in a

telephone interview on 08/22/2006.

2.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

3.   The application has been amended as follows:

Claim 1. (Currently Amended) An information backup system, comprising:

        A.   a local computing system including

           (i)   a local disk; and

           (ii)   a local device driver responsive to requests from a local application

executing on said local computing system, for selectively processing calls to said local

disk or a remote disk for backup of data resident on said local disk, wherein ~~the~~ said local

device driver is disposed between a disk driver and a system interface and monitors ~~the~~

availability of ~~the~~ said local disk, wherein if said local disk is deemed inaccessible by

said local device driver, said local device driver routes read/write operations of said local

computing system to a remote computing system; and

        B.   ~~a~~ said remote computing system including

           (i)   said remote disk; and

           (ii)   a remote device driver responsive to calls from either said local

device driver or calls from a remote application executing on said remote computing

system, wherein calls from said local device driver are processed to perform backup operations to said remote disk of data resident on said local computing system, wherein said remote device driver is disposed between a remote disk driver and a remote system interface and monitors availability of said remote disk, wherein if said remote disk is deemed inaccessible by said remote device driver, said remote device driver routes read/write operations of said remote computing system to said local computing system.

Claim 2. (Original) The information backup system of claim 1, wherein said local device driver communicates with a local disk cache disk driver to perform caching in said local computing system.

Claim 3. (Original) The information backup system of claim 1, wherein said local device driver communicates with a network interface card driver on said local computing system to create a connection with said remote computing system.

Claim 4. (Original) The information backup system of claim 1, wherein said local device driver does not require any changes to an operating system executing on said local computing system.

Claim 5. (Original) The information backup system of claim 1, wherein said remote device driver communicates with said local device driver through a network interface card driver on said remote computing system.

Claim 6. (Original) The information backup system of claim 1, wherein said remote driver does not require any changes to an operating system executing on said remote computing system.

Claim 7. (Original) The information backup system of claim 1, wherein said remote device driver communicates with a local disk cache disk driver to perform caching in said remote computing system.

Claim 8. (Original) The information backup system of claim 3, wherein said network interface card driver on said local computing system communicates with said remote computing system via the Internet.

Claim 9. (Original) The information backup system of claim 3, wherein said network interface card driver on said local computing system communicates with said remote computing system via a LAN or WAN.

Claim 10. (Original) The information backup system of claim 5, wherein said network interface card driver on said remote computing system communicates with said remote computing system via the Internet.

Claim 11. (Original) The information backup system of claim 5, wherein said network interface card driver on said remote computing system communicates with said remote computing system via a LAN or WAN.

Claim 12. (Currently Amended) A method of information backup in a distributed environment, said method comprising:

providing a local device driver on a local computing system responsive to requests from a local application executing on a local computing system, for selectively processing calls to a local disk or a remote disk in said distributed environment for backup of data resident on said local disk, wherein the said local device driver operates between a disk driver and a system interface and monitors the availability of the said local disk, wherein if said local disk is deemed inaccessible by said local device driver, said local device driver routes read/write operations of said local computing system to a remote computing system; and

providing a remote device driver on a said remote computing system responsive to calls from either said local device driver or calls from a remote application executing on a remote computing system, wherein calls from said local device driver are processed to perform backup operations to said remote disk of data resident on said local computing system, wherein the said remote device driver operates between a remote disk driver and a remote system interface and monitors the availability of the said remote disk, wherein if the said local remote

disk is deemed inaccessible by ~~the~~ said ~~local~~ remote device driver, ~~the~~ said ~~local~~ remote device driver routes read/write operations of ~~the~~ said ~~local~~ remote computing system to ~~the~~ said ~~remote~~ local computing system.

Claim 13. (Original) The method of claim 12, wherein said local device driver communicates with a local disk cache disk driver to perform caching in said local computing system.

Claim 14. (Original) The method of claim 12, wherein said local device driver communicates with a network interface card driver on said local computing system to create a connection with said remote computing system.

Claim 15. (Original) The method of claim 12, wherein said local device driver does not require any changes to an operating system executing on said local computing system.

Claim 16. (Original) The method of claim 12, wherein said remote device driver communicates with said local device driver through a network interface card driver on said remote computing system.

Claim 17. (Original) The method of claim 12, wherein said remote driver does not require any changes to an operating system executing on said remote computing system.

Claim 18. (Original) The method of claim 12, wherein said remote device driver communicates with a local disk cache disk driver to perform caching in said remote computing system.

Claim 19. (Original) The method of claim 14, wherein said network interface card driver on said local computing system communicates with said remote computing system via the Internet.

Claim 20. (Original) The method of claim 14, wherein said, network interface card driver on said local computing system communicates with said remote computing system via a LAN or WAN.

Claim 21. (Original) The method of claim 16, wherein said network interface card driver on said remote computing system communicates with said remote computing system via the Internet.
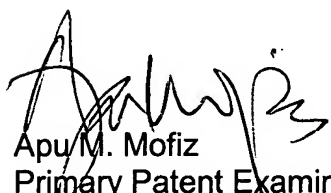
Claim 22. (Original) The method of claim 16, wherein said network interface card driver on said remote computing system communicates with said remote computing system via a LAN or WAN.

Points of Contact

4.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Apu M. Mofiz whose telephone number is (571) 272-4080. The examiner can normally be reached on Monday – Thursday 8:00 A.M. to 4:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached at (571) 272-4146. The fax numbers for the group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Apu M. Mofiz
Primary Patent Examiner
Technology Center 2100

August 23,2006